

IN THE CLAIMS

1. (Original) A computer system, comprising:

a phase locked loop having a phase-frequency detector, wherein the phase-frequency detector inputs a system clock and generates a chip clock, and wherein the phase-frequency detector generates pulses on a first signal and second signal dependent on a relationship between the system clock and the chip clock; and

A 1 a lock detect indicator that uses the first and second signals to determine whether the phase locked loop is out of lock.

✓ 2. (Cancelled)

3. (Original) The computer system of claim 1, wherein the lock detect indicator comprises:

circuitry that generates a first lock indication pulse if a pulse on the first signal or second signal is longer than a predetermined pulse width;

circuitry that generates a second lock indication pulse dependent on the first lock indication pulse and a count value; and

circuitry that uses the second lock indication pulse to dynamically generate a lock status signal, wherein the lock status signal is indicative of whether the phase locked loop is out of lock.

4. (Original) The computer system of claim 1, wherein the lock detect indicator comprises:

circuitry that outputs another lock status signal, wherein the another lock status signal is indicative of whether the phase locked loop is out of lock.

5. (Original) The computer system of claim 1, wherein the lock detect indicator comprises:

circuitry that outputs a past lock status signal, wherein the past lock status signal indicates whether the phase locked loop has been out of lock.

6. (Original) The computer system of claim 1, wherein the lock detect indicator comprises:
reset circuitry that resets the lock detect indicator dependent on a reset input signal.

7 – 17. (Withdrawn)

18. (Original) An integrated circuit, comprising:

generating means for generating a chip clock signal based on a system clock signal,
wherein the generating means uses a first signal and a second signal to maintain a
relationship between the chip clock and the system clock;

detecting means for using the first and second signals to determine whether the
generating means is out of lock; and

indicating means for indicating whether the generating means is out of lock.

19. (Currently Amended) A method for detecting whether a phase locked loop is out of lock,
comprising:

generating a first signal and a second signal based on a relationship between a system
clock and a chip clock used in the phase locked loop;

determining whether a pulse of a the first signal or a the second signal ~~used in the phase
locked loop~~ is greater than a predetermined width;

generating a pulse on a first lock signal based on the determination; and

dynamically generating a pulse on a lock status signal dependent on the pulse on the first
lock signal,

wherein the first signal and the second signal are generated by a phase-frequency detector
included in the phase locked loop.

- ✓ 20 – 22. (Cancelled)

23. (Original) The method of claim 19, wherein generating the first lock signal comprises:
using a predetermined delay; and

generating the pulse on the first lock signal when a pulse on the first signal or the second signal is greater than the predetermined delay.

24. (Original) The method of claim 19, further comprising generating a lock reset signal, wherein generating the lock reset signal comprises:

removing glitches on the first lock signal;
amplifying the pulse on the first lock signal; and
using the pulse on the first lock signal to selectively reset circuitry used for generating a second lock signal.

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25. (Original) The method of claim 24, wherein generating the lock reset signal is dependent on a reset input signal.

26. (Original) The method of claim 24, wherein generating the second lock signal comprises:

counting to a particular value; and
generating a pulse on the second lock signal when circuitry used for counting to the particular value reaches the particular value.

27. (Original) The method of claim 24, further comprising:

generating a pulse on a past lock signal dependent on the second lock signal, wherein the past lock signal indicates whether the phase locked loop has been out of lock.